I-Chao Shen

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https://jdily.github.io

Research Interests

- Computer graphics, vector graphics, data-driven 2D/3D geometry analysis and processing, machine learning.

Education

- **National Taiwan University** **Taipei, Taiwan**
  Ph.D. candidate in Computer Science *Sep 2017 -*
  Advisor: Bing-Yu Chen.
  Thesis: 2D Visual Content Design Driven by Human-Guided Optimization
- **National Taiwan University** **Taipei, Taiwan**
  Master in Information Management and MBA *Sep 2009 - June 2011*
  Advisor: Bing-Yu Chen.
  Thesis: Perspective-aware Warping for Seamless Stereoscopic Image Cloning
- **National Taiwan University** **Taipei, Taiwan**
  Bachelor in Information Management *Sep 2005 - June 2009*

Experiences

- **Research Visitor - JST CREST Project**, Tokyo, Japan *Feb 2018 - July 2018, Aug 2019*
  Supervisor : Takeo Igarashi
- **Research Assistant - CMLab, National Taiwan University**, Taipei, Taiwan *Apr 2017 - July 2017*
  Supervisor : Bing-Yu Chen
- **Research Assistant - Imager Lab, The University of British Columbia**,
  Vancouver, Canada *Sep 2014 - Mar 2017*
  Supervisor : Alla Sheffer
- **Research Intern - Imagination Lab, Adobe Research**, San Jose, CA *May 2015 - Aug 2015*
  Supervisor : Nathan Carr, Duygu Ceylan, Zhaowen Wang
- **Research Assistant - CITI, Academia Sinica**, Taipei, Taiwan *Sep 2011 - July 2014*
  Supervisor : Wen-Huang Cheng

Publications

- **Interactive Optimization of Generative Image Modeling using Sequential Subspace Search and Content-based Guidance**
  Toby Chong Long Hin*, I-Chao Shen*, Issei Sato, and Takeo Igarashi (*: joint first authors)
  accepted in Computer Graphics Forum, arXiv:1906.09840 [cs.GR], June 2019
- **ZomeFab: Cost-effective Hybrid Fabrication with Zometools**
  I-Chao Shen, Ming-Shiuan Chen, Chun-Kai Huang, and Bing-Yu Chen
  Computer Graphics Forum, 2019 (published in Volume 39, Issue 1, Feb, 1, 2020.)
- **Perception-Driven Semi-Structured Boundary Vectorization**
  Shayan Hoshyari, Edoardo Dominici, Alla Sheffer, Nathan Carr, Duygu Ceylan, Zhaowen Wang, I-Chao Shen
  ACM Transactions on Graphics (Proceedings of SIGGRAPH 2018).
- **High-resolution 360 Video Foveated Stitching for Real-time VR**
  Wei-Tse Lee*, Hsin-I Chen*, Ming-Shiuan Chen, I-Chao Shen and Bing-Yu Chen
  Computer Graphics Forum (Proceedings of Pacific Graphics 2017)
- **A Scalable Active Framework for Region Annotation in 3D Shape Collections**
  Li Yi, Vladimir G. Kim, Duygu Ceylan, I-Chao Shen, Mengyan Yan, Hao Su, Cewu Lu, Qixing Huang, Alla Sheffer, and Leonidas Guibas
  ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia 2016)

- **Retargeting 3D Objects and Scenes with a General Framework**
  Chun-Kai Huang, Yi-Ling Chen, I-Chao Shen, and Bing-Yu Chen
  Computer Graphics Forum (Proceedings of Pacific Graphics 2016)
- **Data-driven Handwriting Synthesis in a Conjoined Manner**
  Hsin-Yi Chen, Tse-Ju Lin, I-Chao Shen, and Bing-Yu Chen
  Computer Graphics Forum (Proceedings of Pacific Graphics 2015)
- **Gestalt Rule Feature Points**
  I-Chao Shen, and Wen-Huang Cheng
  IEEE Transactions on Multimedia (TMM), 17(4), pp. 526-537, 2015
- **Geometrically Consistent Stereoscopic Image Editing using Patch-based Synthesis**
  Sheng-Jie Luo, Ying-Tse Sun, I-Chao Shen, Bing-Yu Chen, and Yung-Yu Chuang
  IEEE Transactions on Visualization and Computer Graphics (TVCG), 21(1), pp. 56-67, 2015
- **Stroke-guided Image Synthesis for Skeletal Structure Editing**
  Sheng-Jie Luo, Chin-Yu Lin, I-Chao Shen, and Bing-Yu Chen
  Computer Graphics Forum (Proceedings of Pacific Graphics 2013)
- **Perspective-Aware Warping for Seamless Stereoscopic Image Cloning**
  Sheng-Jie Luo, I-Chao Shen, Bing-Yu Chen, Wen-Huang Cheng, and Yung-Yu Chuang
  ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia 2012).

Technical Reports and Preprints

- **ClipFlip : Multi-view Clipart Design**
  I-Chao Shen, Kuan-Hung Liu, Li-Wen Su, Yu-Ting Wu, and Bing-Yu Chen
  arXiv:2008.12933 [cs.GR], Aug 2020
  (minor revision for Computer Graphics Forum submission, referred from Pacific Graphics 2020)

Workshop Papers, Short Papers, Posters

- **Transferring Deep Reinforcement Learning with Adversarial Objective and Augmentation**
  I-Chao Shen, Shu-Hsuan Hsu, and Bing-Yu Chen
  IJCAI-PRICAI 2020 Workshop on Knowledge Based Reinforcement Learning (KBRL)
- **Large-scale fabrication with interior zometool structure**
  Ming-Shiuan Chen, I-Chao Shen, Chun-Kai Huang, and Bing-Yu Chen
  ACM SIGGRAPH Poster Program 2018
- **A Deep Learning Based Method For 3D Human Pose Estimation From 2D Fisheye Images**
  Ching-Chun Chen, Chia-Min Wu, I-Chao Shen, and Bing-Yu Chen.
  ACM IUI Poster Program 2018
- **Retargeting 3D objects and scenes**
  Chun-Kai Huang, Yi-Ling Chen, I-Chao Shen, and Bing-Yu Chen
  ACM SIGGRAPH Poster Program 2015
- **Painting Photolization**
  Chien-Wen Jung, I-Chao Shen, Sheng-Jie Luo, Bing-Yu Chen, and Wen-Huang Cheng
  ACM SIGGRAPH ASIA Poster Program 2013
- **Texturing and Deforming Meshes with Casual Images**
  I-Chao Shen, Yi-Hua Wang, Yu-Mei Chen, Bing-Yu Chen, and Wen-Huang Cheng
  ACM SIGGRAPH ASIA Poster Program 2012
- **User-Assisted Disparity Maps**
  Hsin-Yi Chen, Yi-Shan Lin, I-Chao Shen, Sheng-Jie Luo, Wen-Huang Cheng and Bing-Yu Chen
  Pacific Graphics 2012 short paper
- **MusicSpace: You "Play" The Music**
  Chun-Yu Tsai, Hung-Jung Lin, Tzu-Hao Kuo, Kai-Yin Cheng, I-Chao Shen, Bing-Yu Chen, and Rung-Huei Liang
  ACM SIGGRAPH Poster Program 2010

Patent

- **Smoothing images using machine learning**
  Nathan A Carr, Zhaowen Wang, Duygu Ceylan, I-Chao Shen
  United States Patent, No. 9799102, issued October 24, 2017.

Teaching Experiences

- **Teaching Assistant**
  - **Geometric Modeling (CS424)** *University of British Columbia* *Jan 2015 - Apr 2015*
  - **Computer Graphics (CS314)** *University of British Columbia* *Sep 2014 - Dec 2014*
  - **Computer Organization and Structure** *National Taiwan University* *Sep 2009 - Jan 2010*

Awards and Grants

- MediaTek Fellowship *2017 - 2020*

Professional Services

- **Reviewer:**
  - SIGGRAPH, SIGGRAPH ASIA
  - Pacific Graphics
  - CAD/Graphics
  - Transaction on Multimedia
  - VRST
  - WACV